Price Discrimination

A2 Micro Economics
Tutor2u, November 2010

Key issues

• The meaning of price discrimination
• Conditions required for discrimination to occur
• Examples of price discrimination
• Economic efficiency and welfare effects
• Evaluation of price discrimination – who really benefits and who loses?
This is It - Cinema Pricing

Can you find examples of price discrimination here?

Price Discrimination in the Market Place

- Why are Levi jeans sold more cheaply in Bulgaria than in London?
- Why are hardback books more expensive than paperbacks?
- Why are car rental prices so much cheaper at weekends?
- Why do UK universities charge higher fees to overseas compared to domestic students?
What is Price Discrimination?

• Price discrimination involves market segmentation
• It is practiced by any firm with price setting power
• It does not occur in perfectly competitive markets
• A firm price discriminates when it charges different prices to different consumers for reasons that do not fully reflect cost differences
• Involves extracting consumer surplus from buyers and turning into additional revenue and profit (producer surplus)

Conditions for Price Discrimination

• (1) The firm must have some price-setting power (i.e. the business is operating in an imperfectly competitive market)
• (2) There must be at least two consumer groups with different price elasticity of demand
• (3) The firm should be able to identify consumers in each group, and set prices differently for each (requires sufficient information about consumer preferences)
• (4) The firm must prevent consumers in one group selling to consumers in the other (i.e. there must be no market arbitrage or market seepage)
1st Degree (Perfect) Price Discrimination

- Perfect segmentation of the market by the supplier
- Every customer charged their “willingness to pay”
- So there is no consumer surplus in the transaction
- The monopolists’ demand curve becomes the marginal revenue curve, i.e. you do not have to lower the price to the higher value customers in order to sell more!
- More goods are sold in total; but the price is higher to some customers
- Total output is higher than under profit-maximization

1st Degree Price Discrimination

Normal profit maximising price and output is P1 and Q1 (where marginal revenue meets marginal cost)

AC = MC

Price

Marginal Revenue

AR (Market Demand)

Quantity

Q1
Perfect discrimination involves separating out each consumer and finding out what they are willing to pay for the product.

In this way – consumer surplus can be extracted and turned into revenue.

Examples of 1st Degree Discrimination

- The bid and offer system in the housing market where potential home buyers put in an offer on an individual property
- Negotiating prices with dealers for second hand cars
- Haggling for the price of a hotel room
- Dutch auctions
- Antiques fairs and car boot sales!
- See the bazaar scene in Monty Python, The Life of Brian
2nd degree - Excess Capacity Pricing

• Excess capacity pricing exists when sellers try to off-load their spare output to buyers
• Examples
  – Cheaper priced restaurant menus at lunchtime
  – Cinema and theatre tickets for matinees
  – Hotels offering winter discounts
  – Car rental firms reducing prices at weekends
• Not always the case that prices are lower if consumers delay their purchases
  – Advance discounts on season tickets for soccer clubs
  – Discounts for early booking of package holidays

2nd degree - Peak Load Pricing

• We assume a fixed supply capacity in the short run
  – The marginal cost of supply is assumed to be constant up to the capacity level
  – The firm can't produce beyond capacity in the short run
• There are two demand curves
  – Peak demand (higher demand, less elastic)
  – Off peak demand (lower demand, more elastic)
• Peak demand occurs at predictable times during the day or season
  – Higher price is charged at peak times to extract consumer surplus – taking advantage of higher willingness to pay
  – Lower demand pressure at off-peak times – the supplier will often cut the price to use up some of the spare capacity and increase total revenue
Peak-load pricing?

• Airline traffic lower on the weekend, highest of all days on Mondays and Bank Holidays
• Telephone call density highest during the daytime when businesses use the phones, lower at night
• Car rental demand higher from Monday - Wednesday
  – Q: Is this price discrimination?
  – Q: If so, who gets discriminated against?
• Rush Hour Traffic?

Peak and Off Peak Pricing

A market where supply reaches a capacity limit – at off–peak times, there is plenty of spare capacity. At peak times, demand is much higher – and the profit maximising price can rise
Peak and Off Peak Pricing (2)

Price (P) and Costs

Price Off-Peak

Supply

Price Peak

Off-Peak Demand

MR Off-Peak

Output Off-Peak

Output

Peak Demand

MR Peak

Output Peak

Output
3rd Degree: Market Separation

- Monopolist seeks to maximize profits in each sub-market
- Sell additional output in elastic market (lower price)
- Reduce sales in inelastic market (increase price)
- Prevent resale of the good or service
- Examples of Market Separation / Segmentation
  - Discounts to Seniors / Senior Citizens
  - Prices for students and adults for rail and bus travel
  - Gender pricing in some bars/night clubs
  - Length of stay / flexibility of services provided by airlines

Third Degree Price Discrimination

![Graph showing Market A with ARa and MRa](chart.png)
Third Degree Price Discrimination

Market A

Price

Quantity

Market B

Price

Quantity

Third Degree Price Discrimination

Market A

Price

Quantity

Market B

Price

Quantity

MC=AC
Third Degree Price Discrimination

Market A

Market B

Price

Price

Pa

Pb

ARa

ARb

MRa

MRb

MC=AC

Quantity

Quantity
Third Degree Price Discrimination

Market A

Market B

Price

Quantity

Pa

ARa

MRa

MC=AC

MRb

ARb

Profit from selling to market A – relatively elastic demand – lower price
Third Degree Price Discrimination

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Profit from selling to market A – relatively elastic demand – lower price

Profit from selling to market B – relatively inelastic demand – higher market price
Advantages of Price Discrimination

• Some consumers are brought into the market who might not have been able to afford the product
  – E.g. lower income consumers / Cheaper anti-viral drugs for consumers in developing countries
  – Social benefits?
• Higher total output than under a single price monopoly
• Profits may finance research and development projects – dynamic efficiency?
• Profits may help to cross-subsidise other activities
  – E.g. postal service profits from business mail helps to maintain the uniform national postal rates
  – Doctors might charge lower income patients less – supported by higher charges for wealthier patients
• Consider impact on allocative and productive efficiency

Pricing in Practice

• Firms are assumed to know the shape and location of their cost and demand curves
• Firms then chose price and/or quantity to maximise their desired objective
• In the real world business environment firms will not be aware of the exact shape of their cost and revenue curves.
• And they face uncertainty – e.g. about the likely reaction of other suppliers in the market
• There are many different reasons for price differences for essentially the same product – not all of them are to do with price elasticity of demand!
Videos on price discrimination

Price Discrimination
The diagram to show splitting a market can raise abnormal profit for a monopolist.

Reading on price discrimination

Online ticket touts 'make 59% average profit'

Why is Windows 7 so expensive in Australia?

Berlin brothel cuts rates for 'green' customers

Enjoy Senior Discounts While They Last
More reading on price gouging

**OFT to scrutinise online pricing**

Online pricing practices are to be investigated by the Office of Fair Trading (OFT). Price comparison websites which claim to give the best deals will be examined in one study focusing on prices. It will also look at activities such as “rip pricing”, where charges and excess are added during the purchase. Another study will look at customers individually tailored using information internet users.

**AA 'concerned' by gender discrimination effect on car insurance**

Tuesday, 05. Oct 2010 05:06

With women consistently seen to be safer drivers than men, the AA has expressed its concern at the prospect that EU gender discrimination rules might remove the possibility to offer female car insurance customers preferential rates.

AA Insurance Director Simon Douglas says: “If this becomes enshrined in UK law then young women, who suffer substantially fewer serious collisions than men of the same age, would subsidise the premiums of male drivers.”

Young male motorists typically make claims as much as twice as large as those made by their female counterparts due to crashes.

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